

## REMARKS

This responds to the Office Action mailed on November 18, 2004, and the references cited therewith. Claim 13 is amended, claim 18 is canceled, and no claims are added; as a result, claims 1-17 and 19-24 are now pending in this application. If the Examiner is not convinced that the pending claims are in condition for allowance after reviewing this document, the courtesy of an Examiner's Interview is respectfully requested prior to preparing and mailing any Final Office Action.

### §102 Rejection of the Claims

Claims 1-24 were rejected under 35 USC § 102(e) as being anticipated by Bergstrom et al. (U.S. 6,122,309, hereinafter "Bergstrom"). The Applicant does not admit that Bergstrom is prior art, and reserves the right to swear behind this reference in the future. In addition, because the Applicant asserts that the Office has not shown that Bergstrom discloses the identical invention as claimed, the Applicant traverses this rejection of the claims.

It is respectfully noted that anticipation under 35 USC § 102 requires the disclosure in a single prior art reference of each element of the claim under consideration. *See Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987). It is not enough, however, that the prior art reference discloses all the claimed elements in isolation. Rather, "[a]nticipation requires the presence in a single prior reference disclosure of each and every element of the claimed invention, *arranged as in the claim.*" *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (citing *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)) (emphasis added). "The *identical invention* must be shown in as complete detail as is contained in the...claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989); MPEP § 2131 (emphasis added).

Regarding independent claims 1, 8, 13, and 20, the Office cites to the same portions of Bergstrom (col. 3, lines 19-61 and col. 19, line 9 through col. 20, line 22) for its assertion that each element of each of Applicant's independent claims is taught in Bergstrom. It is thus unclear from the Office Action precisely which teaching from Bergstrom the Office asserts against a

particular one of Applicant's various claim elements. Applicant respectfully requests that the Office point out these associations with particularity, in the interest of precise and expedited communications.

Regarding claim 1, Applicant is unable to find "a receiver front end to receive a communication signal from a wireless channel," "a noise classification unit to determine a present noise classification for the wireless channel based on the received communication signal," or "an adjustable noise flattening filter to filter the communication signal received from the wireless channel to generate a filtered signal, said adjustable noise flattening filter having a filter response that is responsive to the noise classification determined by the noise classification unit" in the cited portions of Bergstrom. Bergstrom recites an "interference classifier 314" (col. 3, lines 43-49) to identify interference components from e.g., "nearby communications systems and/or hostile entities attempting to jam transmissions..." (col. 3, lines 45-48). Bergstrom also recites:

[T]he interference suppression processor receives the modified signal from the channel 16 and suppresses the interference/jamming components therein using targeted interference suppression...JSOI memory 46 stores, among other things, a *library of feature plane representations corresponding to different jamming and interference types* that may be encountered in the channel 16. Interference suppression processor 42 uses the information stored in the JSOI memory 46 to identify and classify interference components in the receive signal. Bergstrom col. 6, lines 3-16 (emphasis added).

And Bergstrom recites:

[T]he interference suppression processor 42 is used to determine the *type of interference* that is present in the receive signal and to perform interference suppression on the signal based upon the *types of interference* identified.  
Bergstrom col. 7, lines 32-36 (emphasis added).

Bergstrom further recites:

Classification information from the disturbance classification unit 74 is then delivered to the jammer parameter extraction unit 76 which determines *parameters describing the interference/jamming components based upon the classifications*. That is, the parameter extraction method (i.e., the types of parameters that are extracted and the method of calculating them) that is used in the jammer parameter extraction unit 76 depends on the *type of interference identified*...The targeted interference suppression unit 78 includes a *library of software modules* that are each capable of suppressing or removing undesired interference components from a subject signal. Each of the modules in the targeted interference suppression unit 78

works best with a particular *type or class of interference/jamming*. Bergstrom col. 7, lines 66-67 and col. 8, lines 1-17 (emphasis added).

In contrast, Applicant's specification recites:

A noise flattening filter...dynamically adjusted *based upon the present noise spectrum of the channel*. For example, if the noise within the channel is concentrated toward the higher frequencies, a low pass filter response can be selected. Similarly, if the noise within the channel is concentrated toward the lower frequencies, a high pass filter response can be chosen. Application, pg. 2, lines 18-25.

Thus, the "interference classifier" and the "interference suppressor" of Bergstrom are not equivalent to Applicant's "noise classification unit" and "adjustable noise flattening filter," respectively. Applicant is also unable to find "an equalizer to process the filtered signal generated by the adjustable noise flattening filter" in the cited portions of Bergstrom.

Claims 2-7 depend from claim 1, either directly or indirectly, and are therefore believed to be patentable at least for the foregoing reasons.

Regarding claim 8, Applicant cannot find in the cited portions of Bergstrom a "means for estimating a noise spectrum within the wireless communication channel using the communication signal," a "means for selecting a noise flattening filter response based on said noise spectrum estimated by said means for estimating," or a "means for filtering the communication signal using the filter response selected by said means for selecting" utilizing structure recited in the Application. The "interference classifier" and the "interference suppressor" of Bergstrom are not equivalent to Applicant's "noise classification unit" and "adjustable noise flattening filter" (respectively), as previously discussed. Claims 9-12 depend from claim 8, either directly or indirectly, and are therefore believed to be patentable at least for the foregoing reasons.

Claim 13 is believed to be patentable as herein amended. Claims 14-19 depend from claim 8, either directly or indirectly, and are therefore believed to be patentable at least for the foregoing reasons.

Regarding claim 20, Applicant cannot find in the cited portions of Bergstrom "analyzing a communication signal received from a wireless communication channel to determine a class of noise in the wireless communication channel" or "selecting one of a

plurality of filter responses to filter said communication signal based on said class of noise."

As previously mentioned, Bergstrom recites:

[T]he interference suppression processor 42 is used to determine the *type of interference* that is present in the receive signal and to perform interference suppression on the signal based upon the *types of interference* identified.  
Bergstrom col. 7, lines 32-36 (emphasis added).

Bergstrom further defines types of interference to include "nearby communications systems and/or hostile entities attempting to jam transmissions..." Bergstrom col. 3, lines 45-48. In contrast, Applicant's invention classifies noise by frequency band according to relative noise power. See Application pg. 5, lines 5-28 and pg. 6, lines 1-6. Claims 21-24 depend from claim 20, either directly or indirectly, and are therefore believed to be patentable at least for the foregoing reasons.

In summary, since Bergstrom does not teach each and every limitation of the invented claims, that which is disclosed by Bergstrom is not identical to the subject matter of the embodiments claimed, and therefore the rejection of claims 1-24 is improper. Reconsideration and allowance are respectfully requested.

If the Examiner is not convinced as to the allowability of any claim, Applicant respectfully requests that the Examiner clearly state the reasons for rejecting the claim in view of Applicant's comments herein and in view of Examiner's citations to Bergstrom. For any rejection based upon Examiner's personal knowledge, Applicant respectfully requests an affidavit as required by 37 C.F.R. § 1.104(d)(2).

**AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111**

Serial Number: 09/887,595

Filing Date: June 22, 2001

Title: NOISE DEPENDENT FILTER

Assignee: Intel Corporation

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Dkt: 884.429US1

Conclusion

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. As noted above, if the Examiner is not convinced that all of the pending claims are in condition for allowance after reviewing this document, the courtesy of an Examiner's Interview is respectfully requested prior to preparing and mailing any Final Office Action.

The Examiner is invited to telephone Applicant's attorney, Bruce Houston at (210) 892-0437, x221, or Applicant's below-named representative at (612) 349-9592 to facilitate prosecution of this application. If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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Date May 18, 2005

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 18th day of May, 2005.

Name

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